

Appl. No. 10/660, 500
Amdt. dated December 13, 2004
Reply to Office action of August 13, 2004

AMENDMENTS TO THE SPECIFICATION

In the paragraph beginning on page 1, line 6:

The invention relates to a video telephone integrating public-switch telephone network (PSTN) and asymmetric digital subscriber line (ADSL), and more particularly, to a phone device capable of bi-directional video and audio transmissions using conventional telephone lines (double-twist lines). Not only is PSTN, which serves as a telephone system for analog audio signals using copper wires, ~~[[is]]~~ utilized for providing audio transmissions as common telephones, but also a high frequency band ranging from 25 KHz to 1 MHz of ADSL is used for accomplishing video information transmissions. Through a connection established by the PSTN, Internet protocol ~~[[s]]~~ (IP) addresses and port addresses are transmitted in any form via the PSTN, including those of a receiving party to a calling party, and those of a calling party to a receiving party. Digital information is then transmitted via the Internet, thereby completing simultaneous and bi-directional video and audio transmissions between the receiving party and the calling party.

In the paragraph beginning on page 3, line 4:

Meanwhile, ~ digital subscriber line (xDSL) is gradually turning into a target attention of the public. Literally, DSL is a kind of digital subscriber line, with asymmetric digital subscriber line (ADSL) being one of the most prominent xDSL

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techniques. The ADSL utilizes the contemporary PSTN (or, plain old telephone service, POTS) to transmit data in high transmission speeds without requiring augmentation of existing fundamental structural equipments and techniques. Related standards of [[the]] ADSL have been established, and the ADSL is certainly to bring people [[with]] considerable benefits. Again, ~~the word~~ ADSL literally means asymmetric digital subscriber line; that is to say, a high frequency band ranging from 30 KHz to 1 MHz [[of]] over common telephone lines (copper telephone lines in households), is not overlapped with a low frequency band occupied by telephone audio signals. Therefore, both audio signals and data can be simultaneously transmitted for increasing transmission speeds.

In the paragraph beginning on page 3, line 19:

Because [[the]] ADSL utilizes present PSTN (POTS) lines for transmitting data with high transmission speeds, functions of conventional telephones are essential. Within a bandwidth of 1 MHz, a lowest bandwidth of 4 KHz (0 to 4 KHz) is adopted for conventional telephone services. This bandwidth of 4 KHz is separated by a passive filter called a POST splitter from the bandwidth of 1 MHz, and is especially reserved and tailored for conventional telephone services. The [[rest]] remaining portion [[as]] from 100 KHz to 1.1 MHz then transmits computer data at a speed of 6 bits per second. Moreover, because a power supply that sends [[ASDL]] ADSL signals and POTS signals on a same line is provided by a telecommunication provider, the power

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supply is still available even if when the ADSL line malfunctions or a personal computer is shut down. Therefore, a user may [[yet]] still make phone calls using POTS channels by separating audio signals from ADSL signals. The ADSL separates conventional telephone services and computer data services to different channels, and hence it is ensured that telephone services function normally in cases of malfunctions or ~~abruptions~~ interruptions of ADSL services. To be more precise, telephones are able to function normally when multimedia transmissions are being performed via the ADSL.

In the paragraph beginning on page 5, line 5:

The object of the invention is to provide a video telephone integrating public-switch telephone network (PSTN) and asymmetric digital subscriber line (ADSL) for bi-directional video and audio transmissions, in that the video telephone comprises a telephone and a control module unit of common PSTN system, an ADSL module unit, and an image access and display unit. The video telephone according to the invention is capable of bi-directional video and audio transmissions using conventional telephone lines (double-twist wires). Thus, while employing the PSTN for common telephone audio transmissions, video information is also transmitted using a high frequency band ranging from 25 KHz to 1 MHz of the ADSL. Through a connection between two telephones and established by the PSTN, Internet protocol[[s]] (IP) addresses and port addresses are transmitted in any form via the PSTN, including

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those of a receiving party to a calling party, and those of a calling party to a receiving party. Digital information is then transmitted via the Internet, thereby completing simultaneous and bi-directional video and audio transmissions between the receiving party and the calling party.

In the paragraph beginning on page 6, line 19:

A complete video telephone 2 comprises the telephone 11 operating with PSTN systems; a control module unit 12 connected with communication lines of the telephone 10, so as to enable audio transmissions of the PSTN telephone ~~[[;]]~~ to an Internet protocol (IP) address A 15 for ~~dialing-up~~ connecting to an ADSL module unit 13 of the video telephone 1 at activation of the telephone; an ADSL module unit 13, which is connected with the PSTN network to obtain an ~~Internet-protocol~~ IP address B 16, and to ~~dial-up~~ connect to the Internet using PSTN lines after receiving an activation signal of the control module unit 12, so as to develop digital data transmissions between a receiving party and a calling party; and an image access and display unit 14 connected with the ADSL module unit 13, and having an image sensor 141 and a display device 142, ~~wherein the~~ The image sensors 141 and the display devices 142 of both telephones 1, 2 are preferably capable of direct digital image signal transmissions, such that digital image signals are acquired by the image sensor 141, transmitted to the receiving party and the calling party at the other terminal via the ADSL module unit 13, and image signals sent from the receiving party and the

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~~calling party at the other terminal are displayed at that terminal~~ by the display device 142.

In the paragraph beginning on page 8, line 9:

From above, the video telephone 1 according to the invention is directly connected with PSTN lines. ~~Under circumstances that the receiving party and the calling party are simultaneously using the video telephone 1, when~~ When a receiving calling party user dials the telephone number of the receiving party using the handset 111 of the video telephone 1, the control module unit 12 is activated to send a signal. The signal commands the ADSL module unit 13 to dial-up connect to the Internet[[,]] and obtain an Internet protocol its IP address A 15 is obtained. At an instant that when the control module unit 12 of the video telephone [[1]] 2 of the calling receiving party receives ringing signals of the calling party and becomes activated after [[the]] a user picks up the handset 111, another signal is sent to command the ADSL module unit 13 to [[dial-up]] connect to the Internet and to further obtain another Internet protocol its IP address B 16. Via the PSTN lines, the Internet protocol A 15 or B 16 is IP addresses A 15 and B 16 are sent to the control module unit 12 of the receiving party [[or]] and the calling party respectively. For both the receiving party and the calling party, linkage is performed via the Internet using the Internet protocols send IP addresses sent by the PSTN, and video data are bi-directionally transmitted and received between the calling party and the receiving party.

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Hence, common telephone audio transmission functions are accomplished by the PSTN, and at the same time, bi-directional video signal transmissions are also achieved between the receiving party and the calling party by transmitting video data using the high frequency band of the ADSL.

In the paragraph beginning on page 9, line 11:

Referring to FIG. 2, common telephone audio transmission functions are accomplished by the PSTN. In addition, video signal transmissions are also achieved using the high frequency band ranging from 25 KHz to 1 MHz of the ADSL. Through a connection established by the PSTN, ~~Internet protocols~~ IP addresses and port addresses are transmitted in any form via the PSTN, including those of the receiving party to the calling part, and those of the calling party to the receiving party. Digital information is then transmitted via the Internet, thereby completing simultaneous and bi-directional video and audio transmissions between the receiving party and the calling party.

In the paragraph beginning on page 10, line 8:

The video telephone integrating PSTN and ADSL according to the invention, by integrating a common telephone and a control module unit of PSTN systems, an ADSL module unit, and an image access and display unit, provides a video telephone capable of bi-directional video and audio transmissions using conventional telephone lines (double-twist wires). Thus,

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while employing the PSTN for common telephone audio transmissions, video information is also transmitted using a high band ranging from 25 KHz to 1 MHz of the ADSL. Through a connection established by the PSTN, ~~Internet protocols~~ IP addresses and port addresses are transmitted in any form via the PSTN, including those of the receiving party to the calling part, and those of the calling party to the receiving party. Digital information is then transmitted via the Internet, thereby completing simultaneous and bi-directional video and audio transmissions between the receiving party and the calling party.

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